

## PATENT COOPERATION TREATY



## PCT

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 02019WO/St	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/EP2003/002239	International filing date (day/month/year) 05 March 2003 (05.03.2003)	Priority date (day/month/year) 06 March 2002 (06.03.2002)
International Patent Classification (IPC) or national classification and IPC C09C 1/02		
Applicant SACHTLEBEN CHEMIE GMBH		

- This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 5 sheets, including this cover sheet.
- This report is also accompanied by ANNEXES, comprising:
  - ☒ (sent to the applicant and to the International Bureau) a total of 5 sheets, as follows:
    - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
    - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
  - ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) \_\_\_\_\_, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
- This report contains indications relating to the following items:
  - ☒ Box No. I Basis of the report
  - ☐ Box No. II Priority
  - ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - ☐ Box No. IV Lack of unity of invention
  - ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - ☐ Box No. VI Certain documents cited
  - ☐ Box No. VII Certain defects in the international application
  - ☐ Box No. VIII Certain observations on the international application

Date of submission of the demand 02 October 2003 (02.10.2003)	Date of completion of this report 23 December 2003 (23.12.2003)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2003/002239

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☐ The international application as originally filed/furnished
- ☒ the description:
- pages \_\_\_\_\_ 1, 2, 4-10 \_\_\_\_\_, as originally filed/furnished
- pages\* \_\_\_\_\_ 2a, 3 \_\_\_\_\_ received by this Authority on 10 December 2003 (10.12.2003)
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:
- pages \_\_\_\_\_, as originally filed/furnished
- pages\* \_\_\_\_\_, as amended (together with any statement) under Article 19
- pages\* \_\_\_\_\_ 1-14 \_\_\_\_\_ received by this Authority on 10 December 2003 (10.12.2003)
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the drawings:
- pages \_\_\_\_\_, as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP 03/02239

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	1 - 14	YES
	Claims		NO
Inventive step (IS)	Claims	1 - 14	YES
	Claims		NO
Industrial applicability (IA)	Claims	1 - 14	YES
	Claims		NO

### 2. Citations and explanations

#### 1) Reference is made to the following documents:

D1: DE-A-19907703

D2: US-A-4608401

D3: GB-A-2009204

D4: EP-A-0424896

#### 2) Novelty and inventive step - PCT Article 33(1), (2) and (3)

D1 (DE-A-19907703; for the relevant sections see the search report) discloses fine-particle, inorganic particles, for example iron oxide or titanium oxide, in the form of a fine-particle suspension, the particles being surface-treated with two different additives. These are (1) a dispersing agent (e.g. polymethyl-methacrylate) in a quantity of 0.1 to 30 wt.% and (2) an additional additive, such as fatty acids, in a quantity of 0.1 to 10 wt.%. The inorganic particles are mixed and ground in powder form or in the form of moistened press cakes with the two additives; the particle size  $d_{50}$  in the examples ranges from 29 to 83 nm. The products are used for polymers, dyes, coatings, etc.. Foam

production is preferably prevented.

D1 does not disclose the production of dry, powdery particles.

D2 (US-A-4608401; for the relevant sections see the search report) discloses a suspension of inorganic pigments, for example  $\text{TiO}_2$ , which are coated with two additives, (1) a polymer (e.g. polymethylmethacrylate) in a quantity of 1:10 to 10:1 and (2) a surface-active substance (e.g. fatty acid ester) in a quantity of 0.5 to 20 wt.%. The particle size  $d_{50}$  ranges from 0.01 to 500  $\mu\text{m}$ . The products are used, for example, in dyes.

D2 does not disclose the production of dry, powdery particles.

D3 (GB-A-2009204; for the relevant sections see the search report) discloses inorganic pigments, e.g.  $\text{TiO}_2$ , which are coated with two additives, (1) a polymer (e.g. alkali metal salts or ammonium metal salts of fatty acids) in a quantity of 1:10 to 10:1 and (2) an additional substance (e.g. polyethylene glycol, fatty acids) in a quantity of 0.5 to 20 wt.%. The total amount of additives is 0.5 to 60 wt.%. The particle size of the granules obtained is clearly more than 100  $\mu\text{m}$  in the examples.

D3 (EP-A-0424896; for the relevant sections see the search report) discloses inorganic pigments, e.g.  $\text{TiO}_2$ ,  $\text{BaSO}_4$ , which are coated with two additives, (1) a cross-linking agent (e.g. fatty alcohol polyglycol ether) in a quantity of 0.5 to 1 wt.% and (2) a waxy binding agent as additional substance

(e.g. fatty alcohol, fatty acid) in a quantity of, for example, 10 wt.% (formula 1). The resultant suspension is dried. The particle sizes of the granules obtained fall clearly within the millimetre range.

Thus, none of the prior art documents discloses a method such as that claimed in the present application, and nor is such a method suggested. In particular, the prior art does not disclose the combination of producing a coated, fine-particle solid with a particle size of 0.001 to 20  $\mu\text{m}$ .

Consequently, both novelty and inventive step are acknowledged in respect of the subject matter of claims 1 to 14.